

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT -- REVISED

PERMITTEE

Jelly Belly Candy Company
Attn: Valjean Abrahamson
1501 Morrow Avenue
North Chicago, Illinois 60064

Application No.: 99080010

I.D. No.: 097125ABD

Applicant's Designation: APC-1

Date Received: December 28, 2004

Subject: Candy Manufacturing

Date Issued: December 30, 2004

Expiration Date: June 16, 2009

Location: 1501 Morrow Avenue, North Chicago

This permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of 3 steam generators (boilers), candy polishing operation (39 Pans), engrossing operation (54 Pans), sugar handling, starch handling, mogul process, dryer/cooler, kitchen (candy mixing and cooking area), catalytic oxidizer controlling kitchen, engrossing, and polishing operations pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit is issued to limit the emissions of air pollutants from the source to less than major source thresholds (i.e., volatile organic material to less than 25 tons per year). As a result the source is excluded from the requirement to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
- b. Prior to initial issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permits issued for this location.
2. The emissions of Hazardous Air Pollutants (HAP) as listed in Section 112(b) of the Clean Air Act shall be less than 10 tons/year of any single HAP and 25 tons/year of any combination of such HAPs. As a result of this condition, this permit is issued based on the emissions of all HAPs from this source not triggering the requirements to obtain a Clean Air Act Permit Program Permit (CAAPP), and Section 112(G) of the Clean Air Act.
3. Pursuant to 35 IAC 212.123,
 - a. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit.

- b. The emission of smoke or other particulate matter from any such emission unit may have an opacity greater than 30 percent but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period provided that such opaque emissions permitted during any 60 minute period shall occur from only one such emission unit located within a 1000 ft radius from the center point of any other such emission unit owned or operated by such person, and provided further that such opaque emissions permitted from each such emission unit shall be limited to 3 times in any 24 hour period.
4. Pursuant to 35 IAC 212.301, no person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally toward the zenith at a point beyond the property line of the source.
5. Pursuant to 35 IAC 212.321, no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates determined by using the equation:

$$E = 2.54 (P)^{0.534}$$

where

P = Process weight rate in Tons/hour
E = Allowable emission rate in lbs/hour
6. Pursuant to 35 IAC 214.301, no person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission source to exceed 2,000 ppm.
7. Pursuant to 35 IAC 218.301, no person shall cause or allow the discharge of more than 8 lbs/hour of organic material into the atmosphere from any emission source, except as provided by the following exception: If no odor nuisance exists this limitation shall apply only to photochemically reactive material.
8. Emissions of volatile organic material (VOM) shall be reduced by 81% from the candy manufacturing operation consisting of the engrossing, polishing, and kitchen areas, pursuant to 35 Ill. Adm. Code 218.986(a).
9. In the event that the operation of this emission unit results in an odor nuisance, the Permittee shall take appropriate and necessary actions to minimize odors, including but not limited to, changes in raw material or installation of controls, in order to eliminate the odor nuisance.

10. The Permittee shall, in accordance with the manufacturer(s) and/or vendor(s) recommendations, perform periodic maintenance on the pollution control equipment covered under this permit such that the pollution control equipment be kept in proper working condition and not cause a violation of the Environmental Protection Act or regulations promulgated therein.
11. The Permittee shall maintain records of the vendor recommendations at the facility and be available for inspection and copying by the Illinois EPA.
12. Emissions and operation of volatile organic material emissions from candy manufacturing shall not exceed the following limits:

<u>Material</u>	<u>VOM Usage</u>		<u>Minimum Overall Control Efficiency (%)</u>	<u>VOM Emissions</u>	
	<u>(Lb/Mo)</u>	<u>(Lb/Yr)</u>		<u>(Lb/Mo)</u>	<u>(Ton/Yr)</u>
Flavorings, Ethyl Alcohol, Sparkle Glow, and Confectioners Glaze (Total)*	39,860	398,600	90	3,986	19.93
Inks, Isopropyl Alcohol, and Solvents (Total)	916	9,160	0	916	4.58
				Total	24.51

* Controlled by Catalytic Oxidizer

These limits are based on the presumption of complete volatilization of the VOM content and the ability of the catalytic oxidizer to meet the minimum overall control efficiency listed as demonstrated during compliance testing. Compliance with annual limits shall be determined from a running total of 12 months of data.

13. Emissions and operation of natural gas combustion units shall not exceed the following limits:

<u>Equipment</u>	<u>Maximum Firing Rate (mmBtu/Hr)</u>	<u>Pollutant</u>	<u>Emission Factor (Lb/mmscf)</u>	<u>Emissions</u>	
				<u>(Lb/Hr)</u>	<u>(Ton/Yr)</u>
3 Steam Generators (Each)	3.35	NO _x	100	0.34	1.47
		CO	84	0.28	1.23
		PM	7.6	0.03	0.13
		VOM	5.5	0.02	0.09

These limits are based on standard AP-42 emission factors and 8,760 hours of operation. Compliance with annual limits shall be determined from a running total of 12 months of data.

14. Emissions and operation of particulate matter emissions from candy manufacturing shall not exceed the following limits:

<u>Process</u>	<u>Throughput</u>		<u>PM Emission</u>	<u>PM Emissions</u>	
	<u>(Ton/Mo)</u>	<u>(Ton/Yr)</u>	<u>Factor</u> <u>(Lb/Ton)</u>	<u>(Lb/Mo)</u>	<u>(Ton/Yr)</u>
Sugar Handling	1,070	10,634	0.61	653	3.24
Starch Handling	100	1,000	0.61	61	0.31
Mogul*	2,130	21,283	0.08	170	0.85

* Includes Starch Dryer Controlled by Integral Dust Collector

These limits are based on standard AP-42 emission factors and information provided in the permit application. Compliance with annual limits shall be determined from a running total of 12 months of data.

15. This permit is issued based on negligible emissions of particulate matter (PM) from polishing operation, steam/sander with dust collector and engrossing operation. For this purpose emissions from each emission source shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 tons/year.
- 16a. The catalytic oxidizer's combustion chamber shall be preheated to the manufacturer's recommended temperature but not lower than 450°F, before the process is begun, and this temperature shall be maintained during operation of the affected coating lines and production areas.
- b. The Permittee shall follow good operating practices for the oxidizer, including periodic inspection, routine maintenance and repair of defects.
- c. The capture systems in the engrossing, kitchen, and polishing areas shall be designed, operated, and maintained to provide permanent total enclosure, in accordance with the criteria in 35 IAC 218 Appendix B, Procedure T.
- d. The catalytic oxidizer shall be equipped with a continuous monitoring device which is installed, calibrated, maintained, and operated according to vendor's specifications at all times that the catalytic oxidizer is in use. This device shall monitor the catalytic oxidizer temperature rise across each catalyst bed, so as to demonstrate compliance with the control requirements in this condition.
- 17a. Upon request by the Illinois EPA testing shall be performed to demonstrate that the capture systems for the candy manufacturing operation complies with the criteria for a permanent total enclosure. This testing shall be performed in accordance with 35 IAC Part 218 Appendix B, Procedure T.

- b. The following methods and procedures shall be used for testing of emissions, unless another method is approved by the Illinois EPA: Refer to 40 CFR 60, Appendix A, and 40 CFR 61, Appendix B, for USEPA test methods.

Location of Sample Points	USEPA Method 1
Gas Flow and Velocity	USEPA Method 2
Flue Gas Weight	USEPA Method 3
Moisture	USEPA Method 4
Volatile Organic Material	USEPA Method 25, 25A if outlet VOM cont. < 50 ppmv as C Non CH ₄

- c. The Illinois EPA shall be notified prior to these tests to enable the Illinois EPA to observe these tests. Notification of the expected date of testing shall be submitted a minimum of thirty (30) days prior to the expected date. Notification of the actual date and expected time of testing shall be submitted a minimum of five (5) working days prior to the actual date of the test. The Illinois EPA may at its discretion accept notifications with shorter advance notice provided that the Illinois EPA will not accept such notifications if it interferes with the Illinois EPA's ability to observe testing.

- d. At least 30 days prior to the actual date of testing, a written test plan shall be submitted to the Compliance Section of the Division of Air Pollution Control for review. This plan shall describe the specific procedures for testing, including as a minimum:

- i. The person(s) who will be performing sampling and analysis and their experience with similar tests.
- ii. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of maximum emissions and the means by which the operating parameters for the emission unit and any control equipment will be determined.
- iii. The specific determinations of emissions and operation that are intended to be made, including sampling and monitoring locations.
- iv. The test method(s) that will be used, with the specific analysis method, if the method can be used with different analysis methods.
- v. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification.
- vi. Any proposed use of an alternative test method, with detailed justification.
- vii. The format and content of the Source Test Report.

- e. The test shall be designed to measure both the destruction efficiency across the afterburner and the overall control efficiency provided by the combination of the capture system and afterburner.
- f. Upon request by the Illinois EPA, the VOM contents of flavorings and the efficiency of each capture system and control device shall be determined by the applicable test methods and procedures specified in 35 IAC 218.105 [35 IAC 218.211(a)].
- g. Copies of the Final Report(s) for these tests shall be submitted to the Illinois EPA within 14 days after the test results are compiled and finalized.
- h. The Final Report shall include as a minimum:
 - i. A summary of results.
 - ii. General information.
 - iii. Description of test method(s), including description of sampling points, sampling train, analysis equipment, and test schedule.
 - iv. Detailed description of test conditions, including:
 - A. Process information, i.e., mode(s) of operation, process rate, e.g. fuel or raw material consumption;
 - B. Control equipment information, i.e., equipment condition and operating parameters during testing; and
 - C. A discussion of any preparatory actions taken, i.e., inspections, maintenance and repair.
 - v. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration.
 - vi. An explanation of any discrepancies among individual tests or anomalous data.
- 18. The Permittee shall maintain monthly and annual records of the following:
 - a. Usage (lb/month and lb/year), VOM and HAP content (% weight or lb/gallon), and VOM and HAP emissions of the following:
 - i. Flavorings;
 - ii. Alcohols;
 - iii. Sparkle Glow;

- iv. Glazes;
 - v. Inks;
 - vi. Clean-Up Solvents; and
 - vii. Other VOM or HAP Containing Materials.
- b.
- i. Natural gas usage (mmscf/month and mmscf/year); and
 - ii. NO_x, CO, PM, VOM, and SO₂ from natural gas combustion (lb/month and ton/year).
- c.
- i. Starch and sugar handling throughputs (tons/month and tons/year); and
 - ii. PM Emissions from starch and sugar handling, moguls, drying, cooling, and kitchen area with supporting emissions calculations (lb/month and tons/year).
- d. Material composition and throughputs of the moguls, drying, and cooling, and kitchen (tons/month and tons/year).
- e. The Permittee shall collect and record the following information each day for each affected unit and maintain the information at the source for a period of three years:
- i. Catalytic oxidizer pre and post catalyst bed temperature monitoring data (°F);
 - ii. A log of operating time for the capture system, catalytic oxidizer and temperature monitoring device; and
 - iii. A maintenance log for the capture system, catalytic oxidizer, and temperature monitoring device detailing all routine and non-routine maintenance performed including dates and duration of any outages.
- f. Records addressing use of good operating practices for the catalytic oxidizers:
- i. Records for periodic inspection of the catalytic oxidizers with date, individual performing the inspection, and nature of inspection; and
 - ii. Records for prompt repair of defects, with identification and description of defect, effect on emissions, date identified, date repaired, and nature of repair.
19. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least three years from the date of entry and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA or USEPA request for records during the course of a source inspection.

20. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences.
21. Two (2) copies of required reports and notifications concerning equipment operation or repairs, performance testing or a continuous monitoring system shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
9511 West Harrison
Des Plaines, Illinois 60016

It shall be noted that this permit has been revised to incorporate the operation of the replacement starch dryer specified in Construction Permit 04120055.

If you have any questions on this, please call Mike Dragovich at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:MJD:psj

cc: Region 1
Lotus Notes

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from candy processing operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario, which results in maximum emissions from such a plant. The resulting maximum emissions are well below the levels, e.g., volatile organic material to less than 25 tons per year, at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that less material is handled and control measures are more effective than required in this permit.

<u>Equipment/Process</u>	Emissions (Tons/yr)					
	<u>PM</u>	<u>NO_x</u>	<u>CO</u>	<u>SO₂</u>	<u>VOM</u>	<u>HAP</u>
Controlled Candy Manufacturing operations (Total)	----	----	----	----	19.93	----
Uncontrolled Candy Manufacturing operations (Total)	----	----	----	----	4.58	----
3 Steam Generators (Total)	0.39	4.41	3.69	0.03	0.27	0.10
Sugar Handling	3.24	----	----	----	-----	----
Starch Handling	0.31	----	----	----	-----	----
Mogul Process	0.85	----	----	----	-----	----
Polishing Operations	0.44	----	----	----	-----	----
Engrossing Operations	0.44	----	----	----	-----	----
Sander/Steamer	<u>0.44</u>	<u>----</u>	<u>----</u>	<u>----</u>	<u>-----</u>	<u>----</u>
Total:	6.11	4.41	3.69	0.03	24.78	0.10

MJD:psj